Syrian Chemicals Destroyed on U.S. Ship

• **Arms Control Today**

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The destruction of the most dangerous of Syria’s chemical weapons materials was completed Aug. 18 aboard a U.S. ship in the Mediterranean Sea, President Barack Obama announced in a statement that day.

The MV *Cape Ray* neutralized about 600 metric tons of Syrian chemicals using two mobile units of the Field Deployable Hydrolysis System, a technology developed by the Defense Department. About 20 metric tons was weaponsusable sulfur mustard, and the rest was a sarin precursor known as DF, according to figures from the Defense Department and the Organisation for the Prohibition of Chemical Weapons (OPCW).

The announcement of the milestone in the ongoing effort to destroy Syria’s chemical weapons program came a few days before the one-year anniversary of a chemical attack on the Damascus suburb of Ghouta, the catalyst for the sequence of events that led to Syrian chemical weapons materials being destroyed on a U.S. ship.

In response to that attack, which the United States, other governments, and most independent analysts attributed to the regime of Syrian President Bashar al-Assad, the Obama administration appeared poised to launch punitive military strikes against Syria. But Secretary of State John Kerry and Russian Foreign Minister Sergey Lavrov negotiated a deal under which Syria, which has close ties to Russia, agreed to join the Chemical Weapons Convention (CWC) and destroy its chemical arsenal under an expedited schedule. ([See ACT, October 2013.](https://www.armscontrol.org) The OPCW Executive Council and the UN Security Council subsequently endorsed the plan.

Parties to the CWC are responsible for destroying chemical weapons components that they possess, but the plan allowed for the possibility of destruction outside Syria, in part because of the civil war that has been taking place in Syria since early 2011. Several countries were seen as candidates for hosting destruction facilities, but all of them declined, making shipboard destruction an attractive option, particularly for the most dangerous chemicals.

In an Aug. 19 statement congratulating the United States, OPCW Director-General Ahmet Üzümçü reported that “OPCW inspectors aboard the ship verified that no chemicals of any kind escaped into the sea or otherwise impacted the environment.”

Some of the lower-priority chemicals, as well as the effluent from the *Cape Ray* operation, are being processed in land facilities in Europe and the United States.

Of the 1,300 metric tons of chemical weapons material that Syria declared when it joined the CWC, approximately 90 percent was removed from the country for destruction. About 130 metric tons of isopropanol were destroyed in Syria.

The removal of the material proceeded sporadically, and Syria fell months behind the timetable set by the OPCW and the United Nations. Syria and Russia blamed the civil war and the resulting dangers to overland transport. Other countries assigned much of the blame to the Syrian government; Robert Mikulak, the U.S. ambassador to the OPCW, said Syria was “drag[ging] its feet.” ([See ACT, March 2014.](https://www.armscontrol.org)
The chemicals had to be gathered from across the country to the port of Latakia, where an international convoy picked them up for delivery to the Cape Ray and other destruction locations. An OPCW-UN mission oversaw the operation.

**Beating the Schedule**

As Obama and Üzümcü noted in their statements, the chemical destruction on the Cape Ray was completed ahead of schedule. The estimates varied somewhat, but generally had projected that the task would require about two months.

In an Aug. 26 e-mail to Arms Control Today, a Defense Department official said the original estimates were 45 to 90 days, with the range later narrowing to 45 to 60 days once officials had a better idea of the quantities the Cape Ray would be handling. The Pentagon maintained 60 days as the publicly announced figure to avoid “external pressure to meet an ‘artificial’ deadline,” the official said.

The 60-day figure built in some time for delays the official said, noting that the Cape Ray operation marked the first time chemical weapons neutralization was carried out at sea.

The hydrolysis units operated 24 hours a day for six days a week, with one day set aside for activities such as maintenance and testing, the official said, adding that there were no “major problems or delays.”

In an Aug. 18 press release, the Pentagon said Defense Secretary Chuck Hagel had called the ship to congratulate the crew on its work.

**Production Facilities**

Several weeks before the Cape Ray completed its task, the OPCW announced an agreement on a long-running, contentious issue, the destruction of Syria’s 12 remaining chemical weapons production facilities. In a July 24 statement following an Executive Council meeting earlier that day, the OPCW said that seven hangars would be “razed to the ground” and five underground structures, which are part of a system of tunnels, would be “sealed permanently to make them inaccessible.”

Syria had previously insisted on converting the facilities to other uses rather than destroying them. (See ACT, July/August 2014, Web Extra.) The CWC allows countries to do so, with the approval of their fellow to the treaty parties.

The council’s decision document and an addendum from Üzümcü, which were not publicly released but were obtained by Arms Control Today, provide some details on the upcoming steps for the production facilities. The addendum describes a “fill and plug” process that would essentially destroy the parts of the underground structures that were directly related to chemical weapons production.

Sensors will be installed “to monitor the integrity of the interior plug.” The OPCW Technical Secretariat will have the right to inspect the closed portions for five years after the filling and plugging operation is completed, the addendum says.

No “toxic chemical activities” are allowed in the parts of the structures that remain usable.

According to the decision document, the destruction of the hangars is to start within 60 days of July 24, and destruction of the underground facilities within 90 days.

In his Aug. 18 statement, Obama said, “Going forward, we will watch closely to see that Syria fulfills its commitment to destroy its remaining declared chemical weapons production facilities.” He also cited “serious questions” about “omissions and discrepancies in Syria’s declaration to the OPCW” and “continued allegations of use,” apparently a reference to allegations of weapons use of chlorine in Syria earlier this year. The OPCW is investigating those allegations.
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